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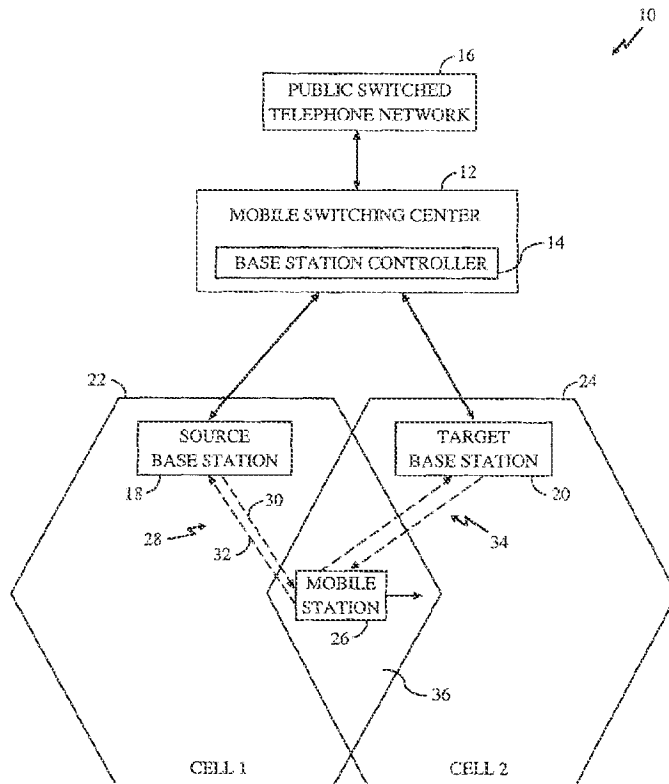
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[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR OPTIMIZING SYSTEM-ACCESS AND SOFT-HANDOFF PARAMETERS BASED ON LOCATION INFORMATION



(57) Abstract: A system and method for updating a current set of parameters in a communications system is provided. The system and method determines the current position of a mobile unit in a first coverage area, determines a set of optimum parameters based on the current position of the mobile unit, and updates the current set of parameters in the mobile unit with the set of optimum parameters. The system and method may be used for optimizing position-dependent system-access and soft-handoff parameters.



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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

 Inte      I Application No  
 PCT/US 02/29894

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7      H04Q7/38

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7      H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 63960 A (ERICSSON INC) 30 August 2001 (2001-08-30)	1-40
X	page 3, line 7 -page 4, line 4	1,7,8, 23,32, 35,36
X	figures 1,2 page 7, line 19-24 page 2, line 3-20 page 8, line 2-4 - line 14,15 page 9, line 1-21	14,15
X	page 5, line 6-11 -page 9, line 15-21	25,33, 37,38
Y	page 9, line 15-21	28,34, 39,40
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	-/-	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"Z" document member of the same patent family

Date of the actual completion of the international search

6 March 2003

Date of mailing of the international search report

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## INTERNATIONAL SEARCH REPORT

Inter: I Application No

PCT/US 02/29894

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 271 486 A (MOTOROLA LTD) 13 April 1994 (1994-04-13)	28, 34, 39, 40
Y	page 5, line 9-13  page 15, line 31 -page 16, line 1 ---	28, 34, 39, 40
X	US 2001/022558 A1 (DUPRAY DENNIS J ET AL) 20 September 2001 (2001-09-20) paragraphs [0102], [0103], [0116]-[0120], [0147], [0436], [0437] ---	41-44
A	US 6 249 252 B1 (DUPRAY DENNIS J) 19 June 2001 (2001-06-19) abstract -----	1-40

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 02/29894**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-40

a. Claims 1-22 relate to a communication system, mobile unit and base station for performing system-access and soft-handoff adopting optimized parameters based on position information of the mobile unit;

b. Claims 23-40 relate to a method, computer readable medium and apparatus for performing soft-handoff, updating a set of parameters and restricting mobility of a mobile unit, based on optimized parameters based on the position information of the mobile unit.

2. Claims: 41-44

c. Claims 41-44 relate to a method, computer readable medium and apparatus for optimizing parameters in a telecommunication system, comprising a mobile unit and an intelligent system.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter Application No  
PCT/US 02/29894

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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